

IN THE ABSTRACT:

Please cancel the abstract and replace with the following:

~~Shot exposure of arranging first marks on a photosensitive substrate via a reticle in M rows and N columns (e.g., three rows and three columns) at a predetermined column interval and row interval is repeated $m \times n$ times (e.g., 2×2), thereby forming first marks in $M \times m$ rows and $N \times n$ columns (six rows and six columns) on the photosensitive substrate. M and m are natural numbers which are relatively prime, N and n are natural numbers which are relatively prime, and $M > m$ and $N > n$ hold. Shot exposure of arranging second marks on the photosensitive substrate via the reticle in m rows and n columns at the predetermined column interval and row interval is repeated $M \times N$ times, thereby forming second marks in $M \times m$ rows and $N \times n$ columns. Accordingly, $M \times m \times N \times n$ overlay marks are formed from the first and second marks. The Misalignment amounts of the first and second marks are measured for each of the $M \times m \times N \times n$ formed overlay marks. The marks to determine a distortion amount is calculated on the basis of the misalignment amounts. Distortion measurement can be performed at a higher precision.~~

-- A method includes steps of exposing each of first shot regions on a substrate to a plurality of first marks aligned at a predetermined interval via a master and a projection optical system, and exposing each of second shot regions on the substrate to a plurality of second marks aligned at the predetermined interval via the master and the projection optical system. The first and second shot regions are arranged so as to make positions of a plurality of transferred first and second marks on the substrate correspond to each other, and the number of the transferred first

marks in the first shot region being larger than the number of the transferred second marks in the second shot region. In addition, a distortion amount of the projection optical system is calculated based on a positional difference measured for the transferred first and second marks which correspond to each other. --